

Séminaire LAL

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mardi 5 décembre 2017 à 11h00

Gauge-Higgs unification : signals at LHC/ILC

In the gauge-Higgs unification the Higgs boson appears as an Aharonov-Bohm phase in extra-dimensions, and is unified with gauge fields. The SO(5) x U(1) gauge-Higgs unification model reproduces the phenomenology of the standard model (SM) at low energies. It predicts, in addition to small deviation from SM in the Higgs couplings, the appearance of Kaluza-Klein (KK) excited modes in 7 TeV - 10 TeV range whose signals can be explored at both LHC and ILC. In particular, interference effects of Z'bosons (1st KK modes of Z boson and photon) can be seen even in the early stage of the proposed 250 GeV ILC with polarized electron beams.

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